

TABLE 27

Companies with domestic R&D paid for by the company and others and performed by the company in the agriculture application area, by industry and company size: 2019

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Domestic R&D		Agriculture R&D							
				Total		Paid for by the company		Paid for by others			
		Companies ^a (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount
All industries	21–23, 31–33, 42–81	28,270	492,956	2,350	i 8,706	2,230	i 8,078	170		627	
Manufacturing industries	31–33	15,180	285,674	1,770	i 7,502	1,740	i 7,032	50		470	
Food	311	870	4,180	240	i 1,164	240	i 1,116	10		48	
Beverage and tobacco products	312	350	1,082	40	i 42	40	i 42	0		0	
Textile, apparel, and leather products	313–16	240	904	10	i 24	10	i 24	0		0	
Wood products	321	80	186	10	i 14	10	i 14	0		0	
Paper	322	90	1,064	20	i 54	20	i 54	0		0	
Printing and related support activities	323	200	420	i 0	0	0	0	0		0	
Petroleum and coal products	324	80	1,306	10	0 - 30	10	0 - 30	0		0	
Chemicals	325	2,330	97,063	400	i 3,969	400	i 3,603	10		366	
Basic chemicals	3251	240	2,360	100	i 108	100	i 108	0		0	
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	180	1,172	30	i 189	30	i 189	0		0	
Pesticide, fertilizer, and other agricultural chemicals	3253	150	1,822 - 1,846	130	i 1,820	130	i 1,474 - 1,502	10		318 - 345	
Pharmaceuticals and medicines	3254	1,060	87,619	60	1,809	60	1,760 - 1,789	10	i	20 - 49	
Soap, cleaning compound, and toilet preparation	3256	270	2,760	10	8	10	8	0		0	
Paint, coating, adhesive, and other chemicals	3255, 3259	460	1,305 - 1,333	100	i 35	100	i 35	0		0	
Plastics and rubber products	326	790	2,856	90	i 55	80	i 54	10		1	
Nonmetallic mineral products	327	170	1,508	i 10	2	10	2	0		0	
Primary metals	331	200	665	10	3	10	3	0		0	
Fabricated metal products	332	1,840	2,885	200	i 54	200	i 53	10		1	
Machinery	333	2,240	15,184	480	i 1,218	470	i 1,207	20		11	
Agricultural implement	33311	190	1,921	180	i 1,066	180	i 1,060	10		6	
Semiconductor machinery	333242	80	4,459	0	0	0	0	0		0	
Engine, turbine, and power transmission equipment	3336	110	1,301	20	i 43	20	i 43	0		0	
Other machinery	other 333	1,880	7,503	290	i 108	280	i 103	20		5	
Computer and electronic products	334	2,280	86,729	220	i 353	210	i 316	20		37	
Communications equipment	3342	300	12,595	40	i 59	40	i 59	10	i	*	i
Semiconductor and other electronic components	3344	640	35,183	i 20	27	20	13	10		13	
Navigational, measuring, electromedical, and control instruments	3345	1,140	17,562	170	i 248	170	i 225	10		23	
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	230	3,342	10	1	10	1	0		0	

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Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	190	9,662	10	38			10	18	10	i 21
Other measuring and controlling device	other 3345	740	4,558	160	i 208	i		160	i 206	i	10 3
Other computer and electronic products	other 334	220	21,388	10	19			10	19	10	i 1
Electrical equipment, appliances, and components	335	900	5,263	30	23			30	22	10	i 1 i
Transportation equipment	336	1,090	45,375	40	210	i		40	205	i	10 5
Motor vehicles, bodies, trailers, and parts	3361-63	540	24,117	20	71	i		20	71	i	0 0
Aerospace products and parts	3364	380	i 18,358	i 20	106	i		20	106	i	10 1
Aircraft, aircraft engine, and aircraft parts	336411-13	200	16,891	i 20	81	i		20	80	i	10 1
Guided missile, space vehicle, and related parts	336414-15, 336419	190	i 1,467	10	i 26	i		10	i 26	i	0 0
Military armored vehicle, tank, and tank component	336992	30	35	0	0			0	0	0	0
Other transportation	other 336	150	2,865	10	33			10	29	10	4
Furniture and related products	337	190	409	10	*			10	*	0	0
Miscellaneous	339	1,310	18,596	20	294 - 325	i		20	294 - 325	i	10 *
Medical equipment and supplies	3391	790	16,014	10	i 295	i		10	i 295	i	0 0
Other miscellaneous manufacturing	3399	520	2,582	10	0 - 30			10	0 - 30	10	*
Nonmanufacturing industries	21-23, 42-81	13,100	207,283	590	i 1,203	i		500	i 1,046	i	120 158 i
Mining, quarrying, oil and gas extraction, and support activities	21	160	2,717	10	*			10	*	0	0
Utilities	22	40	275	10	3			10	3	0	0
Wholesale trade	42	1,560	1,191	210	i 50	i		210	i 46	i	10 i 4
Electronic shopping and electronic auctions	454111-12	60	3,131 - 15,818	i 0	0			0	0	0	0
Transportation and warehousing	48-49	130	9,890	i 0	0			0	0	0	0
Information	51	3,090	110,227	60	711	i		60	710	i	10 1
Publishing	511	1,080	33,019	30	657	i		30	657	i	0 0
Newspaper, periodical, book, and directory publishers	5111	40	61	0	0			0	0	0	0
Software publishers	5112	1,040	32,958	30	657	i		30	657	i	0 0
Telecommunications	517	210	3,733	10	2			10	2	0	0
Data processing, hosting, and related services	518	1,480	30,558	30	43			30	41	10	1

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Other information	other 51	340	42,917	10	9	10	9	0	0	0	0
Finance and insurance	52	220	8,917	0	0	0	0	0	0	0	0
Real estate and rental and leasing	53	50	1,371	0	0	0	0	0	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	20	45	0	0	0	0	0	0	0	0
Other real estate and rental and leasing	other 53	30	1,326	0	0	0	0	0	0	0	0
Professional, scientific, and technical services	54	6,500	53,233	270	i 379	180	i 231	110	148	i	
Architectural, engineering, and related services	5413	1,450	4,207	110	i 140	80	i 70	50	70	i	
Computer systems design and related services	5415	3,020	21,046	10	8	10	8	0	0		
Scientific research and development services	5417	1,230	21,669	130	i 198	90	i 131	60	66		
Research and development in biotechnology	541711	310	6,457	50	124	20	i 93	30	31		
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	900	14,446	i 90	i 67	70	i 39	30	28		
Research and development in the social sciences and humanities	541720	30	766	10	7	0	0	10	7		
Other professional, scientific, and technical services	other 54	810	6,312	30	i 33	20	22	20	11	i	
Health care services	621-23	680	2,265	0	0	0	0	0	0		
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	680	1,380 - 14,067	60	i 62	60	i 57	10	5		
All companies (number of domestic employees)	-	28,270	492,956	2,350	i 8,706	2,230	i 8,078	170	627		
Small companies											
10-19 ^c	-	5,490	5,501	400	i 108	370	i 88	40	20		
20-49	-	7,980	12,418	570	i 239	530	i 208	50	31	i	
Medium companies											
50-99	-	4,960	14,021	410	i 281	380	i 236	30	46		
100-249	-	4,580	19,793	430	i 371	410	i 334	30	37		
Large companies											
250-499	-	2,140	18,883	220	i 262	210	i 241	20	21	i	
500-999	-	1,230	23,969	140	455	130	431	10	24		
1,000-4,999	-	1,330	75,671	150	1,271	150	928	10	342		
5,000-9,999	-	240	50,811	40	1,254	40	1,218	10	36		
10,000-24,999	-	220	88,263	30	2,387	30	2,361	i 10	26		
25,000 or more	-	130	183,626	20	2,078	i 20	2,034	i 10	44	i	

* = amount < \$500,000; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

^a Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology.

^b Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology. These company count estimates also reflect an imputation process implemented for survey year 2014. This change has affected the comparability of these company count estimates with estimates published for years prior to 2014.

^c The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.

Note(s):

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. Companies could report R&D in one, more than one, or no application area. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2019.